

HEALTH THREAT BRIEF

for

SOLDIER'S DEPLOYING TO SOUTHWEST ASIA

Prepared By

U.S. ARMY CENTER FOR HEALTH PROMOTION & PREVENTIVE MEDICINE
Office of the Deputy Chief Of Staff for Operations
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In Coordination With

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PURPOSE

- Provide information for medical health threat briefings to soldiers who are deploying to SWA.
- Health threat briefings are required for all personnel deploying to SWA.
- The information provided here reflects the most current information available at the time of publication. The countermeasures provided here will minimize or eliminate disease and non-battle injuries. Disregarding these basic countermeasures will impact on health, the health of fellow service members, and jeopardize current military operations.

SOUTHWEST ASIA OVERVIEW

- The Southwest Asia region has a wide array of geographical features and climates along coastal regions, valleys, plateaus, deserts, and mountains. Deserts take up much of the land and are generally uninhabited while mountainous regions have elevations exceeding 18,000 feet. Severe sand storms occur throughout the year.
- Summer months (May-Oct) can produce extreme temperatures reaching 119°F with cold nighttime temperatures as low as 33°F. While rain is scarce in most low lying and desert regions, flooding can occur in the higher elevations as a result of summertime monsoons. Winter temperatures also vary with highs reaching 103°F in desert regions such as Kuwait, and lows of 19°F in the deserts, mountains, and plateaus.
- Health risks of military importance are primarily caused by heat and cold injuries caused by extreme heat and intense sunlight and nighttime cold (bitter cold during winter). Some areas in this region meet U.S. sanitation and living standards; however, recent wars, civil unrest, overcrowding, and lack of municipal services in poor, underdeveloped, and occupied areas have resulted in poor living and sanitary conditions. Diseases of military importance in SWA include food/water-borne diseases; insect/tick/mite and animal-borne diseases; and person-to-person contagious diseases.

HEALTH THREAT OVERVIEW

- Health threats can change as a result of weather conditions, natural disaster, war, or disease outbreak
- Health threats can become widespread with movement of displaced people and animals
- U.S. forces may be exposed to a variety of diseases, cultures, languages, religions, and customs common to other countries or regions when working with multi-national forces.

READ AND FOLLOW GUIDELINES IN

A SOLDIER'S GUIDE TO STAYING HEALTHY IN SOUTHWEST ASIA
A guide for all personnel deploying to SWA

A LEADER'S GUIDE TO STAYING HEALTHY IN SOUTHWEST ASIA
A guide for Commander's, senior NCO's, and other unit leaders

Local reproduction of this briefing and other "Staying Healthy" publications is encouraged

Obtain these guides by calling the
U.S. Army Center for Health Promotion & Preventive Medicine
DSN 584-2488 / COM (410) 671-2488
or fax request to DSN 584-8492 / COM (410) 671-8492

WATER PRECAUTIONS

ALL PERSONNEL WILL USE THE FOLLOWING BASIC WATER PRECAUTIONS TO AVOID STOMACH/INTESTINAL DISEASE (i.e., resulting in diarrhea, stomach ache):

- Only consume water from U.S. military approved sources.
- Do not use local water (including ice cubes) for drinking or cooking.
- Ensure all bottled water supplies are inspected by either Preventive Medicine or Veterinary personnel -- Bottled water does not guarantee purity. Avoid storing water in direct sunlight.
- If local water must be used, disinfect using one of the following methods:
 - Calcium hypochlorite at 5.0 ppm for 30 minutes
 - Chlor-Floc™ or Iodine tablets as per label instructions
 - Rolling boil for 5-10 minutes
 - Add 2-4 drops ordinary chlorine bleach per quart of water and wait 30 minutes
- Lakes, rivers, and streams are likely to be contaminated. Avoid unnecessary bathing, swimming, and wading. Some parasites in water can penetrate skin directly.

REPORT ALL INJURIES AND ILLNESSES TO
LOCAL OR UNIT U.S. MEDICAL AUTHORITIES IMMEDIATELY

ICE PRECAUTIONS

- Water-borne transmission of disease may occur via contaminated water or ice.
- Some ice plants ship ice packed in sawdust for insulation.
- Although the U.S. Army uses ice only from those plants that routinely chlorinate their water, it has been noted that many plants use sawdust as an insulator/packer when shipping ice.
- Since there is no way sawdust can be sanitized, all ice that comes into contact with it must be considered contaminated until rinsed off with chlorinated water.
- Ice and ice plants must be monitored closely to protect the troops' health.

(Source: AMEDD Center & School Medical Lessons Learned, Lesson #73, Bi-Weekly Sanitation Inspection and Tests of Ice Plants)

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FOOD PRECAUTIONS

ALL PERSONNEL WILL USE THE FOLLOWING BASIC FOOD PRECAUTIONS TO AVOID DISEASE (i.e., hepatitis):

- Wash hands before eating.
- Only consume food and ice from U.S. military approved sources.
- Do not consume any food in any local establishment or from street vendors unless approved by on site U.S. military Preventive Medicine or Veterinary personnel.
- Keep hot foods hot (140°F or above) and cold foods cold (40°F or below).
- Follow waste disposal procedures identified by Field Sanitation Team members and FM 21-10-1.
- If local food must be used, select foods such as breads and other baked goods, fruits grown on trees that have thick peels (washed with safe water), and foods that have been boiled (rice, vegetables, etc.).

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INFECTIOUS HEPATITIS (VIRAL HEPATITIS A)

- While *infectious hepatitis A* is seldom fatal, it can cause soldiers to be incapacitated for two weeks to one month or longer. This disease is highly communicable (contagious). It is transmitted from soldier to soldier through:
 - **The Fecal-Oral Route:** Eating, drinking, or otherwise putting hands in/around mouth after using the latrine or handling contaminated materials.
Countermeasure: Educate soldiers on the importance of good personal hygiene (wash hands before/after using latrine; before eating; after handling dust, dirt, mud).
 - **Contaminated Water or Food:** Consuming non-approved food or water.
Countermeasure: Ensure soldiers are aware of importance of eating/drinking only from approved sources. Ensure food preparers practice good personal hygiene.
- Field sanitation teams must ensure special emphasis is placed on proper disposal of feces and handwashing devices are provided at all latrines and dining areas.

(Source: AMEDD Center & School Medical Lessons Learned, Lesson #70, Infectious Hepatitis (Viral Hepatitis A))

REPORT ALL INJURIES AND ILLNESSES TO
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AVOIDING DISEASE & INJURIES FROM HAZARDOUS ANIMALS, PLANTS, AND INSECTS

- Minimize contact with all animals -- alive or dead -- especially rodents. Cats, dogs, and other wild animals may carry rabies and other diseases.
 - Avoid animal mascots.
 - Follow personal protective measures when handling or disposing animals, livestock, raw meats, or unpasteurized dairy products.
- Venomous snakes are common and aggressive when disturbed. Centipedes, scorpions, and spiders are found throughout the region.
 - Do not put hands into dark or concealed areas.
 - Wear long sleeves and gloves when working in infested areas.
 - Inspect clothing, shoes, bedding, and latrines before use.
 - Inspect and clear areas before touching, leaning, sitting or laying on anything.
- Many plants and trees are hazardous to humans, causing illness, injury, or skin irritation if touched, and/or may be poisonous if eaten.

REPORT ALL INJURIES AND ILLNESSES TO
LOCAL OR UNIT U.S. MEDICAL AUTHORITIES IMMEDIATELY

AVOIDING HOT WEATHER INJURIES

- A significant threat of hot weather injury exists throughout the year in SWA. Minimize the effects of hot weather by:
 - Drinking plenty of fluids (monitor urine color -- it should be the color of weak lemonade). Thirst is not an accurate indication of the body's need for water. Commanders and leaders must enforce water discipline.
 - Identify soldiers with previous heat injuries; use the buddy system.
 - Wear uniform properly: tuck pant leg into boots/sleeves down; wear natural fiber clothing (cotton) next to skin for increased ventilation.
 - Minimize injuries from sunlight by wearing sunglasses to reduce impaired vision or headaches from sunglare; use unscented sunblock covering exposed skin, face, and neck; use unscented lip balm.
 - Soldiers on guard on other outside duties should avoid standing in direct sunlight for long periods.
 - Follow work/rest cycles and acclimatization guidance. Training programs for soldiers who are climatically or physically unseasoned to hot environments should be limited in intensity and time.

REPORT ALL INJURIES AND ILLNESSES TO
LOCAL OR UNIT U.S. MEDICAL AUTHORITIES IMMEDIATELY

AVOIDING HOT WEATHER INJURIES (continued)

- HEAT INJURIES CAN KILL. Seek immediate medical attention for heat injuries (heat cramps, heat exhaustion, heat stroke).
- It is imperative that soldiers who are susceptible to heat injury be identified:
 - Soldiers with previous heat injuries
 - Soldiers who have diarrhea or sunburn
 - Soldiers who have consumed alcohol
 - Soldiers who are dehydrated or fatigued
 - Soldiers who are in poor physical condition
 - Soldiers using certain drugs (i.e., cold or anti-diarrheal medicines such as doxycycline.)
- Heat injury victims may experience heavy sweating, no sweating, extreme thirst, dizziness, cramps, headache, nausea, seizures, weak/rapid pulse, or unconsciousness.

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AVOIDING COLD WEATHER INJURIES

- Avoid cold weather injuries by:
 - Dressing in layers to avoid overheating
 - Drinking water to maintain urine the color of **weak lemonade**
 - Changing socks and underwear frequently
 - Increasing food intake
 - Using sunglasses, scarf, and unscented lip balm, sunscreen, and skin moisturizers
 - Never sleep inside a closed vehicle or tent while a heater is on without ensuring adequate ventilation

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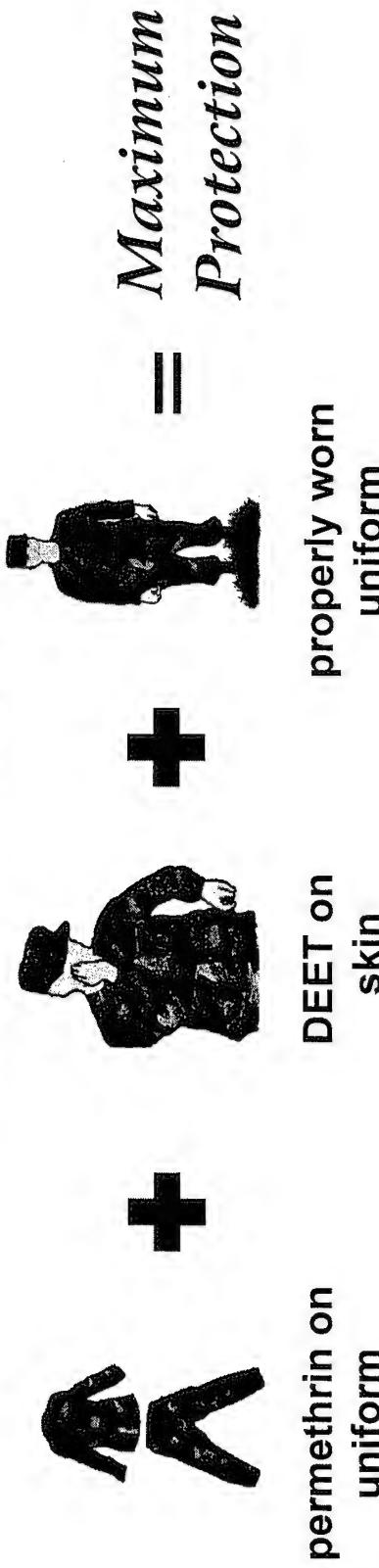
AVOIDING DISEASES CAUSED BY INSECTS & TICKS

- A significant risk of disease caused by insects and ticks exists year-round in SWA including:
 - *Malaria, dengue, and sindbis fever* from mosquitoes
 - *Sand fly fever and leishmaniasis* from sand flies
 - *Plague* from fleas
 - *Crimean-Congo hemorrhagic fever and relapsing fever* from ticks
 - *Typhus and relapsing fever* from lice
- Minimize the threat of disease by using the DoD Insect Repellent System and bednets
 - even if you don't think you're being bitten. Some insects, especially sand flies, are tiny and silent -- you can't hear them and will not feel them biting. Sand flies cause *sand fly fever* and *leishmaniasis*, a serious problem in SWA..

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AVOIDING DISEASES CAUSED BY INSECTS & TICKS (continued)

DoD INSECT REPELLENT SYSTEM



- Treat uniform with permethrin, preferably prior to deployment, and allow to dry before wearing (once the permethrin has dried, treated clothing can be worn in wet conditions).
- Apply DEET cream (NSN 6840-01-284-3982) to exposed skin (1 application lasts 6-12 hours).
- Wear uniform properly to minimize exposed skin.

REPORT ALL INJURIES AND ILLNESSES TO
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AVOIDING DISEASES CAUSED BY INSECTS & TICKS (continued)

- A properly worn uniform means:
 - Sleeves rolled down
 - Pants tucked into boots
 - Undershirt tucked in
- Treat uniforms with permethrin according to label instructions.
 - Individual Dynamic Absorption (IDA) kit (NSN 6840-01-345-0237) (best method -- good for LIFE of uniform).
 - Aerosol spray-can method (NSN 6840-02-278-1336) (reapply after 6th wash).

NOTE: Do not apply permethrin to skin -- it is for clothing use only.

- Use bednets (insect bar). Treat them with permethrin when possible.
 - Spray outside surface -- while it is laying on the ground.
 - One aerosol can treats two bednets.
 - Use poles to prevent bednets from draping on skin; tuck bednets under bedding.
- Remember -- Many mosquitoes and sand flies are **active at night**. Using the DoD Insect Repellent System is **SAFE, EFFECTIVE, and CRUCIAL**.

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LEISHMANIASIS

- *Leishmaniasis* occurs in SWA and is transmitted by sand flies (silent, painless, nighttime biters). Preferred biting sites are unprotected ears and ankles.
- This is a serious disease causing severe skin sores and/or organ damage.
- Treatment is very difficult, requiring MEDEVAC.
- Countermeasures to prevent *leishmaniasis*:
 - Wear permethrin-treated uniforms properly.
 - Minimize skin exposure between dusk and dawn (nightfall and sunup).
 - Wear socks.
 - Use DEET on neck, ears, and other exposed skin.
 - Use bednets treated with permethrin.

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EXAMPLES OF INSECTS THAT TRANSMIT DISEASE

	COMMON NAME	DISEASES	APPROXIMATE SIZE	OTHER COMMON NAMES
	Sand Fly Sand Flies	Leishmaniasis Sand Fly Fever	1.5 to 4.0 mm	
	Louse Lice	Typhus Relapsing Fever	2.5 to 3.5 mm	cootie

REPORT ALL INJURIES AND ILLNESSES TO
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AVOIDING DISEASES CAUSED BY OTHER PEOPLE

- **AVOID ALL SEXUAL CONTACT**
 - Properly used condoms offer some protection from sexually transmitted diseases (HIV/AIDS, gonorrhea, syphilis, hepatitis B, etc.), but it is not 100% protection.
 - **Avoiding sexual contact is clearly the best choice.**
- Reduce the chances of diseases (*flu, meningitis, tuberculosis, colds, diphtheria, etc.*) that are transmitted from person-to-person by:
 - Avoiding contact with local national and overcrowded living areas
 - Sleeping head-to-toe
 - Not coughing or sneezing toward others
- Bathe and wash hands regularly. Wash hands before eating and after using the latrine.

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MANAGING AND REDUCING STRESS

- Separation anxiety, continuous operations, and the observation of human suffering may intensify stress levels.
- Minimize stress and fatigue by:
 - Ensuring all personal, family, and financial issues are resolved before deploying
 - Maintaining physical fitness
 - Using personal protective measures to avoid disease and injury
 - Staying informed
 - Sleeping when the mission and safety permits
- Avoid alcohol. Even small amounts of alcohol can:
 - Increase susceptibility to heat injuries
 - Contribute to jet lag
 - Cause dehydration
 - Lead to depression
 - Decrease physical and mental readiness
- Seek help from Stress Teams or Chaplains.

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AVOIDING DISEASE & INJURY FROM CHANGE IN ALTITUDE AND TIME ZONE

- Regional elevations higher than 8,000 feet, can cause *altitude illness*, also known as *mountain sickness*, and can lead to decreased sleep, and decreased physical and mental work capability. Risk of cold injury, heat injury, and solar UV radiation are all increased at high elevations.
- Soldiers can reduce risk of injuries and illness caused by high elevations by:
 - Allowing adequate adjustment to elevations above 8,200 feet by a 2-4 day stay at lower elevation (6,500 - 8,200 feet) followed by increase in elevation (not to exceed 980 feet per day)
 - Descending below 8,200 feet for sleeping following day climbs
 - Remaining well hydrated; individual water requirements are greater at higher altitudes; and avoiding alcohol
 - Protecting skin (sunscreen), lips (lip balm), and eyes (sunglasses) from UV radiation
- Soldiers can reduce the physical and mental stress caused by time zone changes by taking adequate rest periods; sleeping whenever the mission and safety permits; drinking plenty of fluids; not skipping meals; avoiding alcohol; and maintaining physical fitness.

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ADDITIONAL PERSONAL PROTECTIVE MEASURES

- Take personal responsibility for your health; actively know and use personal protective measures.
- Minimize injuries by ensuring that safety, hearing, mouth, and optical protection are used; and water consumption, work/rest cycles, and stress management measures are followed.
- Ensure all DoD prescribed immunizations and medications are updated and will remain current while deployed.
- Take all DoD prescribed immunizations and medications given by medical personnel before, during, and after deployment.
- Schedule and attend post-deployment (redeployment) checkups.
- Wash hands with soap and water before eating, handling food or kitchen utensils, and after using latrines.
- Do not use scented soaps, deodorants, or other scented health care products, as these products may cause skin irritation or attract biting insects.

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ADDITIONAL PERSONAL PROTECTIVE MEASURES (continued)

- Keep clothing, footwear, and feet clean and dry.
- Avoid skin contact with unfamiliar vegetation.
- Get adequate sleep/rest, ensure proper diet, and drink water frequently.
- Reduce problems related to sun exposure by using sunglasses, sunscreen lotions, and lip protection
- Pack items for safety, health, and hygiene (spare eyeglasses, batteries for hearing aid, ample supplies of prescribed medications, sanitary items).

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ADDITIONAL PERSONAL PROTECTIVE MEASURES -- FEMALE SOLDIERS

- Bring an adequate supply of sanitary products.
- If you are currently taking birth control pills, continue taking them in the same manner; ensure that you have at least a 6-month supply on hand.
- Avoid douching and/or use of perfumed or deodorant feminine hygiene and soap products as these products may cause skin irritation or attract biting insects.
- Drink plenty of fluids -- even when it is not hot -- maintaining urine the color of weak lemonade.
- Try to use the latrines frequently and avoid retention. Avoiding the latrines and holding urine leads to urinary infections.
- Wash the genital area daily; if frequent showering is not possible, use non-perfumed baby wipes or a sponge bath.
- **Pregnant soldiers will not deploy.** If a soldier believes she is pregnant before or during deployment -- ensure appropriate testing is accomplished and notify medical personnel immediately. Notify physician prior to taking any pre-deployment medications, prophylactics, or immunizations.

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